

# Garlic Mustard

## *A Chicago River Fact Sheet*

**Scientific name:** *Alliaria petiolata* (M. Bieb.) Cavara & Grande

**Common names:** Garlic mustard, hedge garlic, sauce-alone, jack-by-the-hedge, poor man's mustard, jack-in-the-bush, garlic root, garlicwort, mustard root.



### **Native Range:**

Europe (introduced to the U.S. in the 1800s for food and medicinal use).

### **Description:**

Garlic mustard is a cool-season and shade tolerant biennial herb that ranges from 2 to 4 feet in height as an adult plant. Leaves and roots release a unique garlic scent when crushed (particularly during warmer months), which helps to differentiate the plant from other mustard plants, however, promotes more stem growth. First year plants appear as a rosette of leaves close to the ground and stay green for the winter. Second-year plants typically produce mature white flowering plants, each with four petals as shown above. Seed production soon follows with numerous black seedlings forming inside siliques, or pods. Garlic mustard can also be detected by its uproot, which is small in width, white in color, and "s"-shaped at the top of the root.

### **Habitat within the United States:**

Garlic mustard is commonly found throughout the northeastern and Midwestern U.S. and also all the way from Canada to the southeastern U.S. west to Kansas, North Dakota, and as far as Colorado, Utah, and the Pacific Northwest.

Garlic mustard grows in river floodplains, forests, savannas, yards, and along roadsides, often in shady and moist areas that have little to no acidic soils.

### **Biology and Spread:**

One plant can produce thousands of seeds, which can scatter meters from the parent plant. In addition, seeds in the ground can germinate up to five years after being created. Although water is able to carry the seeds of garlic mustard, they do not float all that well and are unlikely to be carried too far by the wind. Long distance dispersal is mostly attributed to human activities and wildlife like deer, squirrels, and horses.

### **Ecological Threat:**

Garlic mustard poses a great threat to native plants and animals in large parts of the eastern and Midwestern U.S. because it out competes native plants for light, moisture, nutrients, and space. Wildlife and insect species (like deer and the West Virginia white butterfly) that depend on the springtime plants for food lack essential nutrition when garlic mustard replaces their original food source. The spring wildflowers are also taken away from human use. Therefore, these problems lead to a much less diverse and strong ecosystem.

### **Control and Management Options:**

Prevention is the ideal control option of garlic mustard. Being familiar with the flower, the plant and the habitat and monitoring sites often enough to remove seeds before they set is very useful.

Since garlic mustard seeds can remain active for many years, effective management requires a long-term commitment. Hand removal of plants for small amounts of garlic mustard can be done when the soil is moist, but must be removed carefully so the entire root system comes up and the soil is disturbed as little as possible.

For larger infestations of garlic mustard, flowering plants can be cut as close to the soil surface as possible to prevent further seed production. Once siliques are present, the stalks can be clipped and disposed of to help prevent continued buildup of seeds.

For heavy infestations of garlic mustard, applying the herbicide glyphosate is also successful. Herbicide may be applied at any time of year just as long as the temperature is above 50 degrees F and no rain is expected for at least 8 hours. Native or desirable plants should not have any contact with the herbicide and is best to apply when these plants are dormant.

Controlled burns have also had some success in eradicating garlic mustard in large areas, but must be monitored and repeated for consecutive years to be effective in controlling the seeds.

Biological research is also under way to help control garlic mustard.

**For more information visit [www.chicagoriver.org](http://www.chicagoriver.org)**